

REMARKS

Claims 22-42 are now presented for Examination, having been added in place of original Claims 1-21, which have been canceled without prejudice or disclaimer of subject matter. The new claims correspond to the original claims and differ therefrom only in formal respects; in particular, the new claims are in no way narrower than the corresponding original ones. Favorable reconsideration is respectfully requested.

A Claim To Priority and a certified copy of the priority document for this application were filed on January 15, 2002 (that is, with the present application itself); since both the Claim to Priority and the certified copy are present in private PAIR (see attached partial printout), Applicants respectfully request acknowledgment of the claim for foreign priority and the receipt of the certified copy.

Applicants note that their undersigned attorney discussed paragraph 3 of the Office Action with the Examiner by telephone on November 15, 2005. In particular, Applicants agree that the two Information Disclosure Statements the forms PTO-1449 of which the Examiner has initialed and returned to applicants are the only ones filed by Applicants in this application so far, and that the third, recited in the Patent and Trademark Office on September 2, 2005, does not relate to the present application. While the last-mentioned Information Disclosure Statement has on it the application number of the present application, neither the title, the filing date, the first-named inventor, the customer number, the attorney docket number nor the attorney of record relate to the present application. Accordingly, it is respectfully requested that that document be removed from the Patent and Trademark Office file of the present application, if possible, to avoid confusion of the record, and that in any event it be placed in the file to which it belongs (which, it is believed, the Patent and Trademark Office can identify either from the above-

listed identifying information provided in that document, or by contacting the attorneys who filed that document).

In the outstanding Office Action, the Examiner entered a number of formal objections to the claims, and also rejected the claims under 35 U.S.C. § 112, second paragraph, as being indefinite. The new claims have been carefully drafted to ensure that they conform to the requirements of Section 112, with particular attention to the points raised by the Examiner in paragraphs 4 and 5 of the Office Action.

Also, Claims 1 and 9 were rejected under 35 U.S.C. § 101, as allegedly being directed to non-statutory subject matter. It is respectfully submitted that this rejection is improper, and that all the claims now presented, and all those originally presented, are statutory under Section 101. In particular, newly added Claims 22 and 30, which respectively correspond to original Claims 1 and 9, are believed to meet all requirements imposed by Section 101.

First, Applicants note that the Office Action does not identify in what way original Claims 1 and 9 allegedly fail to be statutory, and thus fails to set out a proper rejection. The rejection merely states that both claims “require the addition of tangible hardware elements to provide tangible results”. That statement, however, appears to be inconsistent with the guidelines set out in MPEP § 2106, at the least because both claims plainly have practical, real-world applications, and are not directed to an abstract idea or mere starting point for further research.

Moreover, it is noted that Claim 9 was, and Claim 30 is, to a device, and the elements of both claims are recited as means adapted to perform stated acts. It is not understood in what way Claim 9 or 30 is viewed even arguably as being non-statutory.

Moreover, assuming for argument's sake that the claims failed to produce practical, real-world results, it is not seen how the recitation of "tangible hardware elements" would necessarily by itself bring such results into existence.

Accordingly, it is believed clear that all the claims define subject matter that is statutory under Section 101. Should the Examiner for any reason repeat this rejection, it is requested that the Examiner explicitly apply the standards of MPEP § 2106 in explaining such rejection; also, because no such explanation was provided in the instant Office Action, it is believed that the next Action, should it repeat this rejection, should not be made final.

Claims 1-21 were rejected under 35 U.S.C. § 103(a) as being obvious from U.S. Patent 5,724,556 (Souder et al.).

Independent Claim 22 is directed to a method of partitioning a computer program situated on a first processing site, the program containing subprograms able to access information distributed over several sites in a computer network. The method of Claim 22 is helpful in the design of such distributed programs, and allows an automatic partitioning of the computer program. By virtue of the phase of automatic determination of the partitionings, a user does not need to define models until a model is obtained whose results are deemed satisfactory. In this respect, the iterative model design process, which may be long and tedious, is thus avoided.

For example, the result of the phase of automatic determination of the partitionings is a list of splitting points of the computer program making it possible to determine the subprograms to be transferred and an allocation site for each of these subprograms.

More particular, independent Claim 22 is directed to a method of partitioning a computer program situated on a first processing site, the program containing subprograms able to transfer information, and the program comprising a step of automatic determination, for at least one of the subprograms, of data representing the transfer of at least part of the information processed by that subprogram. The automatic determination step itself comprises a substep of (a) modifying the source code of the computer program, during which substep are inserted in source code of at least one subprogram of the computer program (i) first lines of instructions making it possible, when they are executed, to obtain and store a reference of a subprogram calling that subprogram, and (ii) second lines of instructions making it possible, when they are executed, to obtain and store the total of the data representing the information received or transferred by that subprogram. The automatic determination step also comprises substeps of (b) compiling the modified code and generating a modified program, and of (c) obtaining the representative data by means of at least one execution of the modified program. Also in the program is a step of allocating the subprogram to a second processing site according to the data.

According to Claim 22, thus, the step of automatic determination of the representative data includes a substep of modifying the source code of the computer program, a substep of compiling the modified code and a substep of obtaining data representing at least one execution of the modified program.

The modification of the source code also referred to as “instrumentation of the source code” makes it possible in particular to add variables to the computer program and to create a data structure making it possible to automatically store the data representing the transfer of information processed by the different subprograms. This data structure

makes it possible in particular to store the transfers of information between two subprograms or between a subprogram and a data source situated on a remote site.

Souder relates to a distributed system modeler for modeling distributed system architecture. The modeler includes logic for receiving interdependency information and specifying interdependencies between a plurality of data objects and programs. The interdependency information can be effectively used for appropriately placing data or distributed objects at particular nodes (col 8, lines 44-47). The modeler also includes logic for defining a plurality of modules, wherein each module of the plurality of modules represents a different grouping of a portion of the plurality of data objects and programs, logic for assigning the modules to nodes in a distributed system, and logic for assigning a distributed transfer methodology between modules in the distributed system. The modeler also includes logic for generating impact analysis criteria defining a quality of said distributed system. The criteria include performance metrics, conflict metrics, data object or program availability metrics, and transaction consistency metrics. Then, the distributed transfer methodology includes a distributed transaction methodology, a synchronous replication methodology, an asynchronous replication methodology, and a procedural replication methodology.

The modeler is based on a module designer 630 which comprises a module handler 1910. The handler is responsible for accepting a user specified module definition through user interface and for providing an analysis of the proposed user module definition in light of the function call and database access statement interdependency information. These modules are defined by a user through user interface 1940 (see col. 17, lines 1-8, and col. 17, lines 50-52).

In the embodiments described in *Souder*, there is no disclosure of any modification of the source code of the program as recited in the claimed invention. In particular, there is no disclosure of an instrumentation of the source code which determines the behavior of the program execution.

The Examiner cites col. 14, lines 12-33, of *Souder*, but this passage merely describes that the checker module checks for changes in data access. Even if this detection implies the requirement to change the distributed architecture or to cause update conflicts, however, there is no disclosure of any action to modify the source code of the program to obtain data representing at least one execution of the program as the claimed invention.

The Examiner also cites col. 12, lines 5-50, which describes the internal architecture of the repository loader and some mechanisms to parse the source file. Again, however, no information concerning a step of modifying the source code in order to analyze the behavior of the program execution is disclosed.

Further, col. 18, lines 1-39, describes the data structure used in the *Souder* system to store the distributed model for the application, but no lines of instructions allowing to obtain data representing the information received or transferred by a subprogram are described.

Indeed, col. 9, line 62, to col. 10, line 15, of *Souder* describes the interdependency matrix, that is to say the association made between business programs and data structures or data objects being accessed by these programs. An interdependency matrix also identifies the type of data access which is made by a program to a data structure CRUD. These dependency detections are performed through an analysis of the source code of the program, whereas in the claimed invention, the interdependencies are identified

through one or more executions of the program during the substep of obtaining representative data.

The passage at col. 11, line 61, to col. 12, line 12, of *Souder* mentions the distributed installer for instantiating or deploying distributed systems produced by the distributed modeler. However, the installation is performed on the basis of user information as described at col. 17, lines 1-9, and col. 17, lines 44-67, in contrast, in the claimed invention, the allocation of a subprogram to a processing site is performed on the basis of the representative data automatically determined through the step of automatic determination.

For all these reasons, it is believed to be plain that Claim 22 is allowable over *Souder*.

Independent Claim 30 is a device claim corresponding to method Claim 22, and is believed to be patentable for at least the same reasons as discussed above in connection with Claim 22.


A review of the other art of record has failed to reveal anything which, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as a reference against the independent claims herein. Those claims are therefore believed patentable over the art of record.

The other claims in this application are each dependent from one or the other of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and allowance of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,


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